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EXAMINER	
CHAWLA, JYOTI	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/565,375	ROOSJEN, JANS	
	Examiner	Art Unit	
	JYOTI CHAWLA	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 May 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-74* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-74* is/are rejected.

7)☒ Claim(s) *1-74* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Note: The Examiner of this application has changed. Please direct all further correspondence to Examiner Chawla.

Applicant's submission filed on May 26, 2009 has been entered as compliant. Claims 1, 3, 5-7, 11-15, 27, 29, 30-35 and 39-44 have been amended in the application. Claims 45-74 are added to the current application. Claims 1-74 are pending and examined in the current application.

Claim Objections

Claims 1-74 are objected to because of the following informalities:
Claims as recited includes the term "characterised in that" in the claims (See e.g., claims 1-4, 39, 41). Applicant is suggested to change the phraseology to a more accepted US term, such as "wherein" to clarify the meaning of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112 (First Paragraph)

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 6, 30-38, 42-44 and 66-74 are rejected under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement. Claims 6 and 30 contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 6 and 30 recite "the falling number of the grain prior to grinding is substantially stable for at least 2-3 weeks"; however, the original specification does not disclose that the falling number of teff grain is substantially stable for at least 2-3 weeks. The specification also does not define what is or can be considered "substantially stable". Thus, claims 6 and 30, as

instantly claimed, and all their dependent claims 31-38, 42-44 and 66-74 do not find support in the original specification.

Claim 23, recites a "A baked product prepared according to claim 21, wherein the product contains at least 0.005% iron, at least 0.14% calcium and at most 0.8% mineral-binding substance", however, Page 12, lines 3-11 of applicants' original disclosure state " The invention provides a food product or a luxury food product comprising a flour according to the invention. A food product or luxury food s product according to the invention may be both gluten-free and gluten-containing. The Teff flour component in such a flour comprises preferably at least 0.005% iron, at least 0.14% calcium, and at most 0.8% mineral (iron)-binding substances". Thus, the specification, while being enabling for flour comprising at least 0.005% iron, at least 0.14% calcium and at most 0.8% mineral-binding substance , does not reasonably provide enablement for "a baked food product …comprising at least 0.005% iron, at least 0.14% calcium and at most 0.8% mineral-binding substance", as is instantly claimed. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Claim Rejections - 35 USC § 112 (Second Paragraph)

The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 23, 27, 28 and 62-65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
Claim 28 was rejected for broad/narrow language in the same claim in the previous office action date 12/24/2008. Applicants' have not amended the claim to correct the indefiniteness, therefore Claim 28 is once again rejected for having broad range or limitation together with a narrow range or limitation that falls within the broad range or

limitation (in the same claim) which is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 28 recites the broad recitation “binding composition” and the claim also recites “preferably a pharmaceutical or a cosmetic composition” which is the narrower statement of the range/limitation.

Claims 8 and 23 are indefinite for the recitation of “the … contains 0.005% iron, at least 0.14% calcium and at most 0.8% mineral-binding substance” as it is unclear whether the proportions are being measured by weight or by recommended daily requirement or some other measure. Clarification and/or correction is required.

The term "luxury food product" in claims 27 and its dependent claims 62-63 is a relative term which renders the claim indefinite. The term "luxury food product" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "luxury food product" may have different meaning for different individuals and thus, the term "luxury food product" as recited in claim 27 renders the claim 27 and its dependent claims 62-65 indefinite.

Claims 27 and 62-65 are also indefinite for the recitation of “a flour according to claim 27", whereas the independent claim 27 recites a food product prepared from unground grain. Thus as recited it is unclear as to whether the independent claim 27 and its

dependent claims 62-65 recite a food product based on ground teff grain or unground grain. Correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1) Claims 1, 4, 8-10, 15-23, 27, 29, 39-41, 45-48 and 62-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kindie et al. (US 2003/0143309), hereinafter Kindie in view of Haarasilta et al (US 5176927), hereinafter Haarasilta.

Evidence relied upon: Eragrain Teff (NPL Document), Teff bv (NPL Document) and Teff-Nutrition Data (NPL Document).

Note: A clear copy of IDS NPL reference Teff bv has been included as a miscellaneous attachment.

Regarding amended claims **1, 18, 45-46**, Kindie discloses the use of teff flour in an injera bread recipe (Publication of application paragraphs [0002, 0032 and 0069]), i.e., a

food product comprising Teff flour. It is noted that Teff is a food crop with scientific or official name *Eragrostis, tef* (See evidenciary reference Eragrain Teff, page 3, line 10), thus, Kindie discloses flour of Eragrostis as recited in claims **1, 18 and 45**.

Regarding claims **1 and 46,** Kindie teaches a flour of a grain belonging to the genus Eragrostis (such as Teff flour), but does not disclose that "the falling number of the grain at the moment of grinding is at least 250". Haarasilta discloses that a specific falling number range of a given flour may be chosen (or optimized) depending on the production process variables (such as process duration or process temperature) for a chosen end product (see Haarasilta, Col. 2, lines 5-20). Accordingly, it would have been obvious to one of ordinary skill in art to use a grain with a falling number at the moment of grinding (i.e. the typical process of creating flour from the grain) in the range as claimed, because it has been held that where the general conditions of the claims are discloses in the prior art, it is not inventive to discover the optimum or workable range by routine experimentation. See In re Aller, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1955). It is noted that typically has a "Hagberg falling number" or "falling number" of a minimum of 300, as evidenced by NPL reference Teff bv (pages 1 and 3), which falls in the claimed range and that Teff grain can be applied to in all kinds of products where regular grain flours are used, such as, beer pasta, batters and soft drinks, as evidenced by NPL reference Eragrain Teff (page 4, lines 33-37).

Claims **27, 62 and 63** are also rejected for the same reasons as discussed above regarding claims 1, 45 and 46 respectively. Further regarding claim 27 and its dependent claims 62-65, see rejection above 35 USC 112 (second paragraph).

Similarly, Kindie in view of Haarasilta are applied to claims **47-48 and 64-65** which recite of teff flour where the falling number of the grain at the moment of grinding is at least 340 (claim 47) and at least 380 (claim 48), for the same reasons as discussed regarding claims 1, 18 and 45 above.

Regarding **claim 8**, Kindie teaches a flour of a grain belonging to the genus Eragrostis (such as Teff flour), but does not disclose the nutritive values of the grain. Evidentiary NPL reference "Teff uncooked" discloses the nutritional content of teff. It is noted that 193 gram serving of Teff contains 347 milligrams of calcium [i.e., (347/193000) X 100= 0.179% calcium] and 14.7 milligrams of iron [i.e., (14.7/1930000) X 100= 0.007% iron], which falls in the recited range of the applicant for claim 8.
Regarding the mineral binding substance Teff uncooked discloses 0% caffeine (mineral-binding substance) the examiner interprets the mineral-binding substance as caffeine in the uncooked teff grain of Teff-Nutrition Data because caffeine is known to be a mineral-binding substance. Further it is also noted that phytic acid is a substance found in the grains that binds to minerals and makes them unavailable to the body. Teff Uncooked does not provide a specific value for mineral-binding Phytic acid, however, evidentiary NPL reference Eragrain Teff discloses that in general Teff is exceptionally low in phytic acid as compared to other grains. Further, Eragrain Teff also discloses that in general wheat contains 600 milligrams of phytic acid (mineral binding substance) per 100 grams of wheat, which is about 0.6 % (See table 1 on page 4 and units verified from data on pages 13-15). Thus, based on the above information it would have been obvious to one of ordinary skill in the art at the time of the invention that proportion of mineral binding phytic acid in Teff would fall within the recited range of at most 0.8% as recited in claim 8.

Regarding **claim 9**, Kindie in view of Haarasilta teaches a flour of a grain belonging to the genus Eragrostis (such as Teff flour), but does not disclose the carbohydrate content and its components. Given that modified Kindie as evidenced by Teff bv and Teff uncooked discloses a typical teff flour with falling numbers and calcium and iron content in the recited range of the applicant, it would have been obvious to one of ordinary skill in the art at the time of the invention that typical teff flour having the falling numbers (which determine the baking quality) and mineral content as recited would also possess carbohydrates in the claimed ranges. Evidence to support this position is found in Eragrain teff which discloses that teff naturally contains about 20% Rapidly

Digestible Starch, about 50% Slowly Digestible Starch, and about 28% Resistant Starch (see Eragrain Teff page 3, bubble chart on the bottom left of the page), which fall in applicants' recited range for claim 9.

Claim 23 is also rejected for the same reasons as discussed above regarding claim 8. Further regarding claim 23, please see rejection above 35 USC 112 (second paragraph).

Regarding the method of baking a product as recited in **claims 16, 19-20** and obtaining a baked product according to **claims 21-22**, using the flour, and batter as recited in **claims 29 and 40,** Kindie discloses making of bread from a teff flour and water batter mixture, such as injera bread, which comprises the steps of preparing a batter by mixing teff flour with a liquid and, optionally, adding a leavening agent, such as yeast, and heating the batter for some time (Publication of application paragraphs [0002, 0032 and 0069]), as claimed. Regarding the limitation of grain or flour or baked product being gluten free as recited in **claims 4, 17, 20-21, 39 and 41**, Kindie discloses a batter made with Teff flour and water (see paragraph [0032]), and it is noted that teff is a grain which is inherently free of gluten as evidenced by NPL references Eragrain teff (page 4, line 22) and Teff bv (page 1, line 4). Thus, the batter and the resulting baked product of teff flour will be gluten free, as recited in claims 4, 17, 20-21, 39 and 41. Regarding the limitations of "kneading the dough to desired shape" and "heating the dough", as recited in claims 19 and 20, it is noted that method steps a) of the said claims recite the flour and water mixture can be a dough or a batter and thus the limitation of kneading which is recited as being associated only with dough becomes an optional limitation. Therefore, Kindie teaches batter and baked injera bread, as recited in claims 4, 16-17, 19-22, 29, 39-41.

Regarding **claims 10 and 15**, Kindie teaches of a teff flour based injera bread product where batter wherein teff flour may be mixed with of gluten-containing crop barley (Publication of application paragraphs [0032 and 0069]). Therefore, the grain of the

injera bread recipe includes both teff flour grains and barley grains, thereby constituting a mixture of grains. The reference however, does not specifically disclose mixing grains and flours of teff and barley (two different grains) as instantly claimed. However, Kindie teaches of addition of barley to the batter to provide additional desirable texture and flavor to the baked product (See Publication of application paragraphs [0032 and 0069]), thus addition of gluten containing crops to enhance the flavor and texture of teff flour based products was known at the time of the invention, as taught by Kindie. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to mix the flour of teff with flour of gluten containing crop, such as, barley and prepare a dry flour blend. One of ordinary skill would have been motivated to modify Kindie and prepare a flour blend at least for the purpose of making a desired blend of dry ingredients for ease of storage and use.

2) Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kindie and Haarasilta as applied to claims 1, 4, 8-10, 15-23, 27, 29, 39-41, 45-48 and 62-65, further in view of IDS reference Celiac Recipes (NPL Document).

Evidence provided by Eragrain Teff (NPL Document), Teff bv (NPL Document) and Teff-Nutrition Data (NPL Document).
Kindie and Haarasilta have been applied to claims 1, 4, 8-10, 15-23, 27, 29, 39-41, 45-48 and 62-65, as discussed above.

Kindie and Haarasilta disclose the limitations of aforementioned claim 1 Kindie teaches teff injera with or without the addition of barley, however, the reference is silent about the addition of additional non-gluten containing flour. However, gluten free foods made with teff and other gluten free flours were known at the time of the invention. Celiac Recipes discloses the use of teff flour in a teff pancake recipe with arrowroot powder **Regarding claim 14**. Thus, it would have been a matter of routine determination for one of ordinary skill in the art at the time of the invention to modify Kindie and include a gluten-free powders or flours with teff . One of ordinary skill in the art would have been

motivated to do so at least for the purpose of creating gluten free foods for consumers with gluten allergy (celiac disease).

3) Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kindie and Haarasilta as applied to claims 1, 4, 8-10, 16-22, 27, 29, 39-41, 45-48 and 62-65, further in view of IDS reference Teff Pasta (NPL Document)

Evidence relied upon: Eragrain Teff (NPL Document), Teff bv (NPL Document) and Teff-Nutrition Data (NPL Document).
Kindie and Haarasilta have been applied to claims 1, 4, 8-10, 15-23, 27, 29, 39-41, 45-48 and 62-65, as discussed above.

Kindie and Haarasilta disclose the limitations of aforementioned claim 16. Kindie teaches teff injera but does not teach an extruded product. **Regarding claim 24,** Teff pasta discloses the recipe a batter and dough that can be extruded to form the desired shape (Page 1). However, gluten free extruded foods made with teff flour were known at the time of the invention. Teff pasta recipe discloses the use of teff flour to make pasta that is extruded. Thus, it would have been a matter of routine determination for one of ordinary skill in the art at the time of the invention to modify Kindie and make a teff flour based extruded food product, such as pasta. One of ordinary skill in the art would have been motivated to do so at least for the purpose of creating gluten free pasta products for consumers with gluten allergy (celiac disease).

4) Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kindie and Haarasilta as applied to claims 1, 4, 8-10, 16-22, 27, 29, 39-41, 45-48 and 62-65 further in view of IDS reference Lee et al (US 3843827).

Evidence relied upon: Eragrain Teff (NPL Document), Teff bv (NPL Document) and Teff-Nutrition Data (NPL Document).

Kindie and Haarasilta have been applied to claims 1, 4, 8-10, 15-23, 27, 29, 39-41, 45-48 and 62-65, as discussed above

Kindie and Haarasilta teach a teff flour based food product, as recited in claim 1. **Regarding claims 25 and 26,** Kindie does not teach of coating foods with teff flour. However, flour coating of foods was well known in the art at the time of the invention. Lee discloses using a wheat flour based batter to coat foodstuff (Col. 1, lines 44-58). It would have been obvious to one of ordinary skill in the food coating art at the time of the invention to modify Kindie and use the teff flour of Kindie to coat foods as taught by Lee. One of ordinary skill would have been motivated to do so at least for the purpose of providing a gluten free coating as a healthy and tasty substitute for the consumer that needs a gluten-free diet.

5) Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kindie and Haarasilta as applied to claims 1, 4, 8-10, 16-22, 27, 29, 39-41, 45-48 and 62-65 further in view of IDS reference Slimak (US 4911943).

Evidence provided by Eragrain Teff (NPL Document), Teff bv (NPL Document) and Teff-Nutrition Data (NPL Document).
Kindie and Haarasilta have been applied to claims 1, 4, 8-10, 15-23, 27, 29, 39-41, 45-48 and 62-65, as discussed above

Kindie and Haarasilta disclose use of teff as part of food product as applied to claim 1, however, Kindie does not teach addition of teff flour to pharmaceutical or cosmetic products. Flours as fillers or thickener for cosmetic preparation were known. **Regarding claim 28**, Slimak discloses the use and preparation of hypoallergenic cosmetics with finely divided flour used as a thickener, filler, or extender (Col. 11, lines 8-11, 19-23). In addition, Slimak also discloses the use of amaranth flour in pharmaceutical products as a filler, extender, or inert ingredient. Thus, both the cosmetic and pharmaceutical products can be prepared as a dry mix or frozen product (Col. 12, lines 6-17).

Therefore, it would have been a matter of routine determination for one of ordinary skill to substitute one thickener (amaranth powder) for another (teff flour or teff powder) to make the cosmetic and pharmaceutical composition. One of ordinary skill would have been motivated to do so at least for the purpose of providing an alternative filler based on cost and availability at the time of the invention.

6) Claims 2-3, 5-6 and 49-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kindie in view of Haarasilta further in view of Stallknecht et al, hereinafter Stallknecht.

Evidence relied upon: Eragrain Teff (NPL Document), Teff bv (NPL Document) and Teff-Nutrition Data (NPL Document).
Kindie and Haarasilta have been applied to claims 1, 4, 8-10, 15-23, 27, 29, 39-41, 45-48 and 62-65, as discussed above.

Regarding **claims 2, 3, 49-51,** Kindie in view of Haarasilta, as evidenced by Teff bv disclose everything from the aforementioned claim 1. Regarding the after-ripening of the grain, it is noted that grain goes through an after ripening process after harvesting, in which the falling number of the grain increases, as recited in claim 2. Also see applicants' disclosure paragraph [0015]. Further it is noted that under given storage conditions, the falling number would increase based on the post harvest storage time. It is typical that grains be stored for some time after harvest to allow for drying, cleaning and transportation to the destination. Specifically regarding storage of teff Stallknecht discloses that Teff grain can be easily stored under local storage conditions and can also be stored for a relatively long period with a minimum of up to 3 years before losing its viability (Page 3, last 3 bullets before Conclusion section). Given that a grain would inherently after-ripen after harvesting and given that after-ripening increases the falling number, it would have been obvious to one of ordinary skill in the art that storing teff for periods of up to 3 years before grinding will result in increased falling number of the teff

grain as compared to the falling number at harvest time. Further, the applicant's disclosure does not provide any specifics other than storage time as a factor in increasing the falling number of the teff grain, therefore, one of ordinary skill would have a reasonable expectation that teff grain stored for up to 3 years under proper storage conditions (as taught by Stallknecht), will increase the falling number to at least 1.01/1.05/1.20 and 1.30 times the falling number at the time of harvesting, as claimed, absent any clear and convincing evidence or argument to the contrary.

Regarding claims 5, 52-53 Kindie in view of Haarasilta in light of Teff bv disclose everything from the aforementioned claim 1. In addition, it was well known to store teff grain under normal storage conditions for up to a period of 3 years as taught by Stallknecht (page 3) as discussed above. Therefore, it would have been obvious to one of ordinary skill in the grain art at the time of the invention to store or hold teff grain for a desired period of time and grind the grains after a period of 4/6 or 8 weeks after harvesting. One of ordinary skill in the art at the time of the invention at least for the purpose of routine processes, such as, cleaning, packing and transporting teff grain. One of ordinary skill in the art would have also been motivated to do so in order to achieve the desired falling number and thus, a desired baking quality in the resulting flour.
Furthermore, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the length of after-ripening for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 6, Kindie and Haarasilta in light of Teff bv disclose everything from the aforementioned claim 1. In addition, it was well known to store teff grain under normal storage conditions for up to a period of 3 years as taught by Stallknecht (page 4) as discussed above. Therefore, it would have been obvious to one of ordinary skill in the grain art at the time of the invention to store or hold teff grain for a desired period of

time to allow the falling number of the grain to have been stabilized for 2-3 weeks before grinding. One of ordinary skill in the art at the time of the invention would have been motivated to do so at least for the purpose of achieving grain of relatively consistent quality based on desired falling number and a consistent high quality in the resulting flour. Further, the applicant is referred to rejection of claim 6 under 35 USC 112 (first paragraph).

7) Claims 7, 30, 42, 54-55 and 66-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kindie Haarasilta and Stallknecht as applied to claims 2-3,5-6 and 49-53 above, further in view of Otsubo et al (US 5130158), hereinafter Otsubo.

Evidence provided by Eragrain Teff (NPL Document), Teff bv (NPL Document) and Teff-Nutrition Data (NPL Document).
Kindie, Haarasilta and Stallknecht have been applied to claims 1-6, 8-10, 15-23, 27, 29, 39-41, 45-53 and 62-65, as discussed above.

Regarding **claims 7, 54 and 55**, Kindie teaches a flour of a grain belonging to the genus Eragrostis (such as Teff flour), but does not disclose that the flour particle size, i.e., the grain is so finely ground that the flour can pass through a sieve with a pore size of at most 150 microns (claim 7), at most 120 microns (claim 54) and at most 100 microns (claim 55). However, flours made by grinding grains are ground to varying degrees based on the intended use of the grain based flours. Fine flours with particle sizes that pass through 100 micron sieve were known and available at the time of the invention, as taught by Otsubo (Abstract, Column 2, lines 14-25). Further, as evidenced by NPL reference Teff bv (page 3) it is noted that typical teff flour passes through 150 and 100 micron sieve, and a minimum of 70% of the teff flour passes through a 100 micron sieve to be a typical property of teff flour. The examiner interprets 70% to be considered an "essential part of the flour." Accordingly, it would have been obvious to one of ordinary skill in art to grind teff grains, such that the teff flour can pass through a sieve with pore size at most 100 microns, as claimed. One of ordinary skill in the art at the time of the

invention would have been motivated to do so at least for the purpose of having a specific size distribution of flour particles that are suited to making a high quality food product with good appearance texture and taste (as taught by Otsubo, Column 1, lines 45-65). Furthermore, it would have been well within the purview of one of ordinary skill in the art because it has been held that where the general conditions of the claims are disclosed in the prior art, it is not inventive to discover the optimum or workable range by routine experimentation. See In re Aller, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1955).

Claim 30, depends from claim 3 and includes all the limitations of claims 4-10. Therefore, claim 30 is rejected for the same reasons as discussed regarding claims 3-10 above. Further, the applicant is referred to rejection of claim 30 under 35 USC 112 (first paragraph)

Claim 42, recites the same limitation as claims 10 and 15 and is rejected for the same reasons as discussed regarding claims 10 and 15 above.

Claim 66 recites the same limitation as claims 53 and is rejected for the same reasons as discussed regarding claim 53 above.

Claims 67-68 recites the same limitation as claims 54-55 respectively and are rejected for the same reasons as discussed regarding claim 54-55 above.

8) Claims 11-13, 31-32, 43-44, 56-61 and 69-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kindie Haarasilta , Stallknecht and Otsubo as applied to claims 7,30, 42, 54-55 and 66-68 above, further in view of IDS reference to Science of Bread: Ethiopian Injera Bread (NPL Document).

Evidence relied upon: Eragrain Teff (NPL Document), Teff bv (NPL Document) and Teff-Nutrition Data (NPL Document) and Union Mill (NPL Document).

Kindie, Haarasilta, Stallknecht and Otsubo have been applied to claims 1-10, 15-23, 27, 29-30, 39-42, 45-55 and 62-68, as discussed above.

Kindie, Haarasilta , Stallknecht and Otsubo, teach teff flour injera product comprising a mixture of grains (barley and teff) with teff having the desired falling number as discussed regarding aforementioned claim 30. The references are silent about the relative proportion of the two flours. Science of Bread discloses the use of teff flour in an Ethiopian injera bread recipe. **Regarding claims 11-12, 31, 56-58, 69-71**, Science of Bread recipe uses 25% of teff flour, and rest all purpose flour, as claimed. Teff flour was known to have falling number in the recited range of above 300 and above 400/420/450, as discussed above to have a falling number and in the desired range as discussed regarding claims 1, 46-48. Regarding the remainder of flour consisting of a falling number lower than 400 and 350, Union Mill discloses that all-purpose flour has a minimum falling number of 250. Therefore, this property of all-purpose flour is considered to be inherent to the all-purpose flour being used in the Science of Bread recipe. Thus, teff flour containing food product with a mixture of flour with desired falling numbers was known (Science of Bread). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kindie and specify an amount of each of the flours, at last for the purpose of having a desired taste, flavor, and texture.

Regarding claims 13, 32, 59-61 and 72-74, Kindie, Haarasilta , Stallknecht and Otsubo, are applied to the aforementioned claim 30. Regarding the after ripening limitations of claim 32, applicant is referred to rejection of claims 5, 52-53 where the same limitations have been addressed. Thus, it would have been a matter of routine determination for one of ordinary skill in the art at the time of the invention to ground the teff grains after a period of 4/6 or 8 weeks after harvesting to achieve the desired falling number. Similarly, it would have been obvious to one of ordinary skill in the grain art at the time of the invention to ground the all-purpose flour grains before a period of 4 and 2 weeks after harvesting to achieve the desired falling number and /or baking quality of the resulting mixture.

Claims 42-44, recite the limitation of gluten containing crop, such as, barley , as taught by Kindie [0069]. Further, Science of Bread discloses all purpose flour, a gluten containing crop.

9) Claims 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kindie Haarasilta , Stallknecht, Otsubo and Science of Bread as applied to claims 19-20 and 30-32 above, further in view of IDS reference to Celiac Recipes.

Evidence relied upon: Eragrain Teff (NPL Document), Teff bv (NPL Document) and Teff-Nutrition Data (NPL Document) and Union Mill (NPL Document).
Kindie, Haarasilta, Stallknecht, Otsubo and Science of Bread have been applied to claims 1-23, 27, 29-32, 39-55 and 62-74, as discussed above.

Kindie, Haarasilta , Stallknecht, Otsubo and Science of Bread disclose the limitations of aforementioned claims 19-20 and 30-32. Kindie teaches of method of making teff injera with or without the addition of barley (see paragraphs [0032 and 0069], however, the references are silent about the addition of additional non-gluten containing flour. However, gluten free foods made with teff and other gluten free flours were known at the time of the invention. Celiac Recipes discloses the use of teff flour in a teff pancake recipe with arrowroot powder **Regarding claims 33-38**. Thus, it would have been a matter of routine determination for one of ordinary skill in the art at the time of the invention to modify Kindie and include a gluten-free powders or flours with teff . One of ordinary skill in the art would have been motivated to do so at least for the purpose of creating gluten free foods for consumers with gluten allergy (celiac disease) where the gluten free arrowroot powder adds starch that is easily digestible, a good thickener, and mixes well with gluten-free flour.

Response to Arguments

Applicant's arguments with respect to amended claims 1-74 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JYOTI CHAWLA whose telephone number is (571)272-8212. The examiner can normally be reached on 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/JC/
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